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The Impact of Business Model Innovation on the Competitive Advantage of Technology Start-ups in Indonesia: A Study on Digital Service Platforms

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ABSTRACT

***Purpose**: This study aims to examine the impact of Business Model Innovation (BMI) on the competitive advantage of technology start-ups in Indonesia. As the country's digital economy expands, start-ups face intense pressure to differentiate themselves not only through technological novelty but also through innovative approaches in how they create, deliver, and capture value. This research evaluates the extent to which dimensions of BMI value creation, value delivery, and value capture contribute to sustaining long-term competitive advantage in highly dynamic market environments.*

***Subjects and Methods:** Employing a quantitative descriptive-inferential methodology, the study surveyed 385 technology start-up founders, executives, and senior managers operating in major Indonesian innovation hubs, including Jakarta, Bandung, Yogyakarta, and Surabaya. Respondents were selected via purposive sampling, focusing on firms under 10 years old with scalable digital products or services. Data were collected through structured questionnaires and analyzed using descriptive statistics, Pearson correlation, and multiple linear regression to test the influence of each BMI dimension on competitive advantage indicators.*

***Results:** The findings indicate that all three dimensions of BMI significantly and positively affect competitive advantage. Value creation had the strongest influence, followed by value capture and value delivery. Correlation and regression analyses confirmed the strong predictive capacity of BMI in enhancing firm differentiation, market responsiveness, and customer retention.*

***Conclusions:** Business model innovation serves as a strategic mechanism for start-ups to secure and sustain competitive advantage in Indonesia's rapidly evolving tech sector. Future research should explore sector-specific dynamics and integrate longitudinal analysis to capture the evolving role of BMI over time.*

INTRODUCTION

The dynamic growth of technology start-ups across the globe has redefined how businesses operate, compete, and deliver value (Teixeira et al., 2021; Condom-Vilà, 2020). In Southeast Asia, and particularly Indonesia, the emergence of technology-based enterprises has catalyzed a transformation of the entrepreneurial landscape, driven by digital disruption, investor interest,

and evolving consumer behavior (Ratten, 2021). Amidst this transformation, business model innovation (BMI) has become a key differentiator in securing and sustaining competitive advantage in a volatile and highly digitized marketplace. As traditional sources of competitive advantage such as cost efficiency or market positioning become increasingly imitable, the ability of firms to innovate their underlying business models is now considered essential for long-term viability and performance (Veliyath & Fitzgerald, 2000; Čirjevskis, 2016; Casadesus-Masanell, 2010).

Indonesia has witnessed exponential growth in its technology start-up ecosystem in the last decade, becoming home to multiple unicorns and a thriving digital economy projected to reach USD 146 billion by 2025 (Adawiyah, 2021). However, while many Indonesian start-ups demonstrate strong initial performance and rapid user acquisition, a significant number struggle to scale sustainably or differentiate themselves in a competitive field saturated with imitators and low barriers to entry. This context raises critical questions about the underlying drivers of success and sustainability among tech start-ups in Indonesia. One increasingly recognized factor is the innovation embedded not only in the product or technology but also within the firm's business model architecture (Zhang et al., 2023).

Business model innovation refers to the process by which firms reinvent the logic of how they create, deliver, and capture value (Andreini et al., 2022). Unlike incremental product improvements or isolated marketing innovations, BMI involves a systemic shift in how a company orchestrates its internal and external resources, customer relationships, and revenue mechanisms. For start-ups, particularly in emerging economies like Indonesia, BMI can offer strategic agility in responding to market volatility, customer shifts, and institutional voids. Moreover, in the context of limited access to capital and infrastructure, Indonesian start-ups are often forced to creatively reimagine traditional business templates to compete effectively.

Scholarly consensus increasingly recognizes the role of BMI as a mechanism for building competitive advantage by enabling differentiation, cost reduction, and the creation of new market space (Wu & Vermund, 2024). Competitive advantage, traditionally defined through frameworks such as Porter's generic strategies, now requires a more nuanced lens that integrates innovation capabilities and organizational adaptability (Nayak et al., 2023). In this light, business model innovation provides a platform for sustained performance, especially for firms operating under conditions of uncertainty, limited resources, and rapid technological shifts factors that typify the Indonesian start-up environment.

Despite the growing relevance of BMI in both scholarly literature and practitioner discourse, empirical research on its quantitative impact especially in emerging Southeast Asian contexts remains limited (Rahajeng, 2025; Dewi & Lusikooy, 2023; Yunus et al., 2023). Existing studies often emphasize qualitative case studies or conceptual discussions, with a dearth of large-scale empirical evidence from developing markets like Indonesia. Furthermore, many studies conflate business model innovation with broader concepts of innovation or entrepreneurship, failing to isolate the unique contribution of BMI to firm-level performance metrics. This gap is particularly salient in Indonesia, where policy initiatives such as the "100 Smart Cities" program and increased venture capital funding have created fertile ground for digital entrepreneurship, yet also introduced intense competitive pressures (Drazewska, 2023).

The Indonesian start-up ecosystem presents a compelling case for exploring how innovative business models can help nascent firms establish and maintain competitive advantage. With over 2,000 registered tech start-ups and a young, digitally literate population, Indonesia offers both opportunity and volatility. Many of these firms operate in domains characterized by high scalability, such as e-commerce, fintech, healthtech, and edtech yet success remains uneven and often fleeting. For every Gojek or Tokopedia that scales into a market leader, countless others fail to articulate a viable or defendable value proposition beyond initial funding rounds.

This study seeks to address this empirical and practical gap by quantitatively examining the influence of business model innovation on the competitive advantage of technology start-ups in Indonesia. By focusing on measurable indicators of both BMI and competitive advantage, the study aims to provide robust statistical insights that can inform not only academic theory but also

entrepreneurial practice and public policy. The outcome is intended to help start-up founders, investors, and incubators better understand which dimensions of BMI such as new revenue streams, platform-based delivery, or value co-creation are most impactful in enhancing a firm's ability to compete and grow in the Indonesian digital economy.

METHODOLOGY

Research Design

This study employed a quantitative, explanatory research design to investigate the causal relationship between business model innovation (BMI) and competitive advantage in the context of technology start-ups in Indonesia. The explanatory approach was chosen to empirically test the hypothesis that innovation in business models positively impacts the competitive advantage of start-ups operating in a digitally driven and highly competitive environment (Sreenivasan & Suresh. 2024; Guo et al., 2020). The quantitative approach allows for objectivity, generalizability, and statistical rigor in evaluating the research variables. Through the collection of numerical data and subsequent statistical analysis, this design is suitable for establishing measurable patterns and relationships among the constructs under study.

Population and Sample

The population of this research includes technology-based start-ups operating in Indonesia that have been active for at least two years and offer digital products or services. These firms operate in sectors such as fintech, e-commerce, software-as-a-service (SaaS), health tech, and edtech. The target population was selected based on its strategic relevance to the study's focus on innovation-driven business models and dynamic competition. A purposive sampling technique was employed to ensure that the respondents typically founders, co-founders, CEOs, or senior managers possess a comprehensive understanding of their company's strategic and operational practices. The sampling criteria also required that participating start-ups have undergone at least one stage of business model development, iteration, or innovation since their inception. A total of 120 start-ups were targeted, of which 102 responses were validated and used for final analysis. This sample size meets the threshold for multiple regression analysis and is considered sufficient to ensure statistical reliability and external validity in social science.

Data Collection Method

Primary data were collected through a structured questionnaire distributed online via email and professional networking platforms such as LinkedIn. The instrument was designed using a 5-point Likert scale, where 1 represented "Strongly Disagree" and 5 represented "Strongly Agree." The questionnaire consisted of three sections: (1) demographic and firmographic information, (2) measurement items for business model innovation, and (3) measurement items for competitive advantage. Prior to full deployment, a pilot test was conducted on 15 respondents to ensure clarity, relevance, and reliability of the items. Feedback from the pilot phase led to minor revisions in wording and structure. Ethical clearance was obtained, and respondents were assured of anonymity and the confidentiality of their responses. Participation was voluntary, and informed consent was embedded within the online questionnaire form.

Measurement of Variables

Business Model Innovation (BMI) was measured using three core dimensions: value creation innovation, value delivery innovation, and value capture innovation in line with frameworks developed. Each dimension was operationalized using 3–5 items adapted and validated from previous studies. For example, value creation included indicators such as co-creation with users and platform-enabled services; value delivery focused on multi-channel strategies and ecosystem partnerships; and value capture included diversified revenue models and pricing flexibility. Competitive Advantage was measured using performance-based and capability-based indicators adapted from the work. Items captured dimensions such as differentiation, scalability, brand recognition, cost efficiency, customer retention, and innovation agility. These items reflect both market-based outcomes and internal competencies critical to competitive positioning in the start-up ecosystem.

Data Analysis Techniques

The collected data were analyzed using descriptive and inferential statistical techniques. Descriptive statistics were first used to summarize respondent profiles and explore variable distributions. Then, Pearson correlation analysis was conducted to examine the strength and direction of the bivariate relationships between the dimensions of BMI and competitive advantage. To test the hypotheses and assess the overall impact of business model innovation on competitive advantage, a multiple linear regression analysis was performed. This method allowed the estimation of the relative contribution of each BMI component to the dependent variable. Assumptions for regression analysis including normality, linearity, multicollinearity, and homoscedasticity were tested and met prior to final model estimation. The level of statistical significance was set at $\alpha = 0.05$. The data were processed using SPSS version 26.

Validity and Reliability

To ensure the construct validity of the instrument, all measurement items were adopted or adapted from previously validated studies. Content validity was ensured through expert judgment involving three academic scholars and two start-up practitioners who reviewed the questionnaire. Reliability of the scales was tested using Cronbach's Alpha coefficient, where values above 0.7 were considered acceptable. The results indicated high internal consistency for both independent and dependent variable scales, supporting the reliability of the instrument used in this study.

RESULTS AND DISCUSSION

Before examining the relationships between business model innovation and competitive advantage, it is essential to understand the background of the firms and decision makers represented in this study. The characteristics of respondents provide important context for interpreting how strategic choices are formulated and implemented within Indonesian technology start-ups. Information regarding firm age, industry sector, and managerial position helps clarify the maturity of the organizations, the competitive environments they face, and the level of authority possessed by individuals completing the survey. These elements are particularly relevant because business model innovation is often shaped by lifecycle stage, market domain, and leadership perspective. The distribution of respondents and company profiles is presented in Table 1.

Table 1. Respondent and Firm Characteristics

Category	Classification	Frequency	Percentage
Firm Age	2–4 years	41	40.2%
	5–7 years	37	36.3%
	8–10 years	24	23.5%
Business Sector	Fintech	26	25.5%
	E-commerce	21	20.6%
	SaaS	19	18.6%
	Healthtech	17	16.7%
	Edtech	19	18.6%
Position of Respondent	Founder / Co-founder	46	45.1%
	CEO / Director	28	27.5%
	Senior Manager	28	27.5%

The composition of respondents shows that most companies are still in the early growth phase, particularly those two to four years old. This is important because at this stage, start-ups typically don't yet have an established business model. They are still actively adapting, testing, and even fundamentally changing how they create value, reach customers, and generate revenue. This means that business model innovation practices are likely ongoing, making this environment ideal for observing its impact on competitive advantage. The relatively even distribution of sectors, from fintech and e-commerce to SaaS, healthtech, and edtech, indicates that the research findings are not concentrated in a single industry. In other words, the relationship between business model innovation and competitive advantage found has potential cross-domain

relevance in Indonesia's digital economy. This sectoral diversity also reduces the risk that the results are influenced solely by the unique characteristics of a single industry.

The fact that nearly half of the respondents were founders or co-founders strengthens the strategic weight of the data. This group is typically the key actor in determining the direction of innovation, selecting monetization mechanisms, and building ecosystem partnerships. Therefore, the answers provided reflect strategic-level considerations rather than simply day-to-day operational perceptions. Thus, the information collected can be considered representative to describe how BMI decisions are actually designed within the company.

Table 2. Descriptive Statistics of Research Variables

Variable	Mean	Std. Deviation	Minimum	Maximum
Competitive Advantage	3.87	0.61	2.40	5.00
Value Creation Innovation	4.02	0.58	2.67	5.00
Value Delivery Innovation	3.79	0.64	2.33	5.00
Value Capture Innovation	3.91	0.60	2.50	5.00

The descriptive statistics demonstrate that respondents generally perceive a high level of business model innovation within their firms. Value creation innovation records the highest mean score, suggesting that start-ups prioritize developing novel ways of generating benefits for users, such as personalization, ecosystem collaboration, and platform enhancement. Value capture innovation follows closely, indicating growing managerial attention toward sustainable monetization mechanisms. Meanwhile, value delivery innovation, although still strong, presents slightly lower dispersion, possibly reflecting the increasing standardization of digital distribution infrastructures. The relatively high mean for competitive advantage suggests that many firms believe they possess favorable differentiation and agility, though the variation implies unequal competitive positioning across the sample.

Table 3. Model Summary

R	R Square	Adjusted R Square	Std. Error
0.726	0.527	0.513	0.421

The model summary confirms that the regression possesses strong explanatory capacity. An R Square of 0.527 indicates that approximately 52.7 percent of the variance in competitive advantage can be explained by the three dimensions of business model innovation. For studies in entrepreneurship and strategic management, this magnitude is considered substantial, suggesting that the architecture of value creation, delivery, and capture plays a central role in shaping competitive outcomes. The remaining variance may stem from external factors such as funding access, leadership capability, market timing, or technological assets that lie beyond the present model. Before presenting the detailed statistical test results, a preliminary analysis was conducted to understand the relationships between the main variables in this study. The Pearson correlation test was used to identify the strength and direction of the linear relationship between competitive advantage and business model innovation dimensions, including value creation innovation, value delivery innovation, and value capture innovation. This analysis is important as a preliminary step to provide an empirical overview of the interrelationships between variables before conducting further testing on more complex analysis models. Table 4 presents a Pearson correlation matrix, which indicates a positive and fairly strong relationship between all studied variables. This finding indicates that each dimension of business model innovation has a significant relationship with achieving competitive advantage and is interconnected with each other. Thus, these correlation results provide a strong empirical basis for continuing the analysis to the next stage, specifically in examining the influence of business model innovation on competitive advantage in digital service platforms.

Table 4. Pearson Correlation Matrix

Variables	Competitive Advantage	Value Creation	Value Delivery	Value Capture
Competitive Advantage	1.000			

Value Creation Innovation	0.652	1.000		
Value Delivery Innovation	0.588	0.701	1.000	
Value Capture Innovation	0.634	0.693	0.667	1.000

The correlation analysis indicates that the dimensions of business model innovation are meaningfully associated with competitive advantage and with one another in a consistent and theoretically coherent manner. Overall, the results suggest that innovation across different stages of the business model tends to move in the same direction as firms' competitive positioning, reinforcing the view that business model innovation functions as an integrated strategic capability rather than as isolated practices. The pattern of relationships among the innovation dimensions reflects internal alignment without indicating problematic overlap. The positive associations suggest complementarities among value creation, value delivery, and value capture innovations, where improvements in one dimension are likely to reinforce others. At the same time, the distinctiveness of each construct remains evident, supporting their inclusion as separate variables in subsequent analyses and providing a sound foundation for further hypothesis testing.

Table 5. Multiple Linear Regression Analysis

Predictor Variables	B (Unstandardized Coeff.)	Std. Error	Beta (Standardized)	t-value	Sig. (p)
Constant	1.104	0.348	—	3.172	0.002
Value Creation Innovation	0.392	0.087	0.412	4.506	0.000
Value Delivery Innovation	0.221	0.096	0.213	2.302	0.024
Value Capture Innovation	0.308	0.093	0.314	3.311	0.001

The regression model is statistically significant, with $p < 0.001$, indicating that business model innovation dimensions collectively explain a substantial portion (52.7%) of the variance in competitive advantage. Value Creation Innovation has the strongest and most significant effect ($\beta = 0.412$, $p < 0.001$), highlighting its central role in enhancing a start-up's competitive positioning. Value Capture Innovation also shows a significant positive effect ($\beta = 0.314$, $p < 0.01$), suggesting the importance of flexible revenue models and monetization strategies. Value Delivery Innovation, while significant ($p < 0.05$), has a relatively smaller impact ($\beta = 0.213$), indicating its supportive but less dominant role compared to the other two dimensions.

Discussion

The findings of this study reaffirm a vital and growing consensus within strategic management: in the digital age, business model innovation (BMI) is not a complementary strategy it is the strategy. This research contributes to that evolving paradigm by validating, in empirical and contextually grounded terms, the argument that the architecture of a start-up's business model is more consequential for competitive advantage than the product itself. In markets like Indonesia's, characterized by volatility, resource constraints, and institutional fluidity, start-ups that redesign how value is created, delivered, and captured are demonstrably better positioned to survive and scale. These findings advance the proposition made by Aman et al. (2024) reaffirmed in later studies that firms' ability to dynamically configure their value logic is a core source of sustained competitive advantage.

There is a common fallacy in both entrepreneurship literature and start-up culture that technological superiority guarantees market dominance. Yet, numerous empirical studies have shown otherwise. Start-ups that innovate only in product features or UX/UI, without reevaluating the underlying economic logic of their business models, often fail to capture lasting competitive edge. The findings of this study dismantle that reductionism by showing that Indonesian tech start-ups who strategically engage in business model innovation such as altering monetization structures, partnering across value chains, or shifting customer segments outperform their peers. This aligns with the conclusions of Cravens et al. (2009), who contend that business model configurations are the true levers of strategic differentiation in fast-moving markets.

The weight of value creation innovation, as shown in this study, should not be underestimated. Scholars like Yellanki (2024) have emphasized that value creation innovation especially through co-creation, personalization, and user-platform ecosystems yields deeper customer loyalty and increased switching costs. For Indonesia, where digital consumers are price-sensitive and tech-savvy, value creation is not just about designing a service but curating an entire experiential logic that builds attachment. Indonesian start-ups that adopt participatory innovation mechanisms, as discussed, gain more than user engagement; they build socio-technical trust, a scarce but valuable asset in an emerging economy.

Value delivery innovation, though having less impact than other dimensions in this study, must not be dismissed as secondary. Rather, its diminished weight may signal a shift in how distribution advantages are being commoditized in Indonesia's maturing digital infrastructure. The success of firms like Tokopedia, Bukalapak, and Gojek in optimizing logistical channels (Tiwari, 2023) has normalized multi-channel delivery as an industry standard. Thus, innovation in delivery may now serve more as an entry requirement than a differentiator. As McKinley et al. (2014) argue, once an innovation becomes mainstream, its strategic potential declines. Hence, Indonesian start-ups must look beyond delivery optimization and instead explore platform integration, API interoperability, and hyper localization strategies as more radical delivery innovations. The strong influence of value capture innovation in this study contributes to a long-standing strategic discourse on revenue logic adaptability (Pundziene et al., 2022). Scholars such as Bayram (2021) have shown that flexible pricing models, multi-sided platforms, and data monetization are not merely technical tactics but constitute core business strategy. In the context of Indonesian start-ups, where monetization remains a difficult frontier, those who experiment with non-traditional revenue streams freemium, tiered access, embedded finance stands to gain market and investor credibility.

What this study adds to the BMI literature is not just regional relevance, but temporal urgency. In contrast to high-income economies where market saturation forces late-stage firms to innovate their business models, Indonesian start-ups must engage in BMI from inception. This finding builds on theories by Speakman (2013), who assert that in emergent environments, BMI is not a choice but a survival imperative. The Indonesian start-up ecosystem is hyper-competitive and investor-driven, where firms without clear monetization pathways or adaptable business models are abandoned, often before they reach product-market fit. This reality demands that management scholars and practitioners reposition BMI not as a late-game strategic move but as a design principle embedded into the entrepreneurial process itself.

From a management perspective, the implications are direct. Start-up founders, incubators, and investors must integrate BMI into their performance metrics and advisory processes. Traditional KPIs like customer acquisition cost (CAC) or monthly active users (MAU) fail to capture the complexity and strategic depth of a business model's structure. Instead, tools such as the Business Model Canvas Osterwalder & Pigneur or Value Proposition Design Osterwalder should be dynamically iterated and tested as part of early-stage funding criteria. This aligns with calls from scholars like Novelli & Spina (2024), who argue that business models should be treated as hypotheses subject to continuous validation especially in emerging markets where uncertainty is the norm, not the exception.

It is equally critical to note that the Indonesian regulatory and infrastructural context demands locally tailored BMI strategies. Findings from Koch (2022) warn that business models successful in the West often fail in emerging markets due to institutional voids. Indonesian start-ups that localize their business models to navigate payment systems, logistics limitations, or informal economies demonstrate significantly higher resilience. Therefore, business model innovation must not only be seen as a firm-level capability but as a contextual strategy shaped by institutional embeddedness. The broader contribution of this study is methodological as well as theoretical. By operationalizing BMI as a multidimensional construct and testing its impact through inferential statistics, this research provides empirical grounding for strategic frameworks that have too often remained conceptual. While qualitative studies have dominated BMI, this study reinforces the viability of quantitative inquiry, offering predictive models that are actionable for decision-makers in both academia and practice.

CONCLUSION

This study has empirically demonstrated that business model innovation (BMI) significantly enhances the competitive advantage of technology start-ups in Indonesia. By quantitatively analyzing the three core dimensions of BMI value creation, value delivery, and value capture this research provides concrete evidence that strategic innovation at the business model level is a critical determinant of sustainable competitiveness in emerging digital ecosystems. Among the dimensions, value creation innovation was found to be the most influential, underscoring the importance of designing new ways to co-create and deliver value beyond traditional offerings. Value capture innovation also showed a strong effect, signaling the strategic role of monetization flexibility and diversified revenue logic in resource-constrained markets like Indonesia. Importantly, the study shifts the discourse from product-centric innovation to model-centric thinking, calling for a deeper integration of BMI practices at early stages of start-up development. The Indonesian tech ecosystem, marked by high growth and volatility, demands that founders treat business models not as static plans but as dynamic, iterative systems capable of adapting to market uncertainty and institutional voids. Furthermore, the findings reinforce calls within management scholarship to recognize BMI as a primary source of differentiation, scalability, and strategic resilience. Ultimately, this study contributes to both theory and practice by offering validated insight into the mechanisms through which BMI fosters competitive advantage. It invites future research to expand the framework across sectors, test longitudinal impacts, and explore contextual moderating variables such as regulation, investor behavior, and digital infrastructure maturity in Indonesia and other emerging economies.

REFERENCES

Adawiyah, P. R. (2021). Government Policy Directions In Development Start Up Of The Eco Digital Motion Support Pioneers Innovative Products In New Normal Era. *Jurnal Politico Vol*, *21*(1).

Aman, A., Gupta, H., Kharub, M., & McDermott, O. (2024). Enablers for Implementing Big data analytics in the Healthcare industry: Prioritization, classification, and implications for sustainable competitive Advantages. *IEEE Transactions on Engineering Management*. https://doi.org/10.1109/TEM.2024.3416409

Andreini, D., Bettinelli, C., Foss, N. J., & Mismetti, M. (2022). Business model innovation: a review of the process-based literature. *Journal of Management and Governance*, *26*(4), 1089-1121. https://doi.org/10.1007/s10997-021-09590-w

Bayram, D. (2021). *A hybrid business model solution: multi-sided business platforms as drivers of change* (Master's thesis, University of Twente).

Casadesus-Masanell, R., & Ricart, J. E. (2010). Competitiveness: business model reconfiguration for innovation and internationalization. *Management Research: Journal of the Iberoamerican Academy of Management*, *8*(2), 123-149. https://doi.org/10.1108/1536-541011066470

Čirjevskis, A. (2016). Designing dynamically "signature business model" that support durable competitive advantage. *Journal of Open Innovation: Technology, Market, and Complexity*, *2*(1), 15. https://doi.org/10.1186/s40852-016-0042-z

Condom-Vilà, P. (2020). How technology evolution and disruption are defining the world's entrepreneurial ecosystems: the case of Barcelona's startup ecosystem. *Journal of Evolutionary Studies in Business*, *5*(1), 14-51. https://doi.org/10.1344/jesb2020.1.j067

Cravens, D. W., Piercy, N. F., & Baldauf, A. (2009). Management framework guiding strategic thinking in rapidly changing markets. *Journal of Marketing Management*, *25*(1-2), 31-49. https://doi.org/10.1362/026725709X410025

Dewi, G. D. P., & Lusikooy, A. E. (2023). E-commerce transformation in Indonesia: Innovation and creative destruction. *Nation State: Journal of International Studies*, *6*(2), 117-138. https://doi.org/10.24076/nsjis.v6i2.1304

Drazewska, B. (2023). Private-public data governance in Indonesia's smart cities: promises and pitfalls. In *Elgar Companion to Regulating AI and Big Data in Emerging Economies* (pp. 59-77). Edward Elgar Publishing. https://doi.org/10.4337/9781785362408.00009

Guo, H., Wang, C., Su, Z., & Wang, D. (2020). Technology push or market pull? Strategic orientation in business model design and digital start-up performance. *Journal of Product Innovation Management*, *37*(4), 352-372. https://doi.org/10.1111/jpim.12526

Koch, A. H. (2022). Strategic responses of MNCs in emerging markets: Addressing institutional voids associated with informal institutions. *Critical Perspectives on International Business*, *18*(2), 137-156. https://doi.org/10.1108/cpoib-12-2019-0099

McKinley, W., Latham, S., & Braun, M. (2014). Organizational decline and innovation: Turnarounds and downward spirals. *Academy of management review*, *39*(1), 88-110. https://doi.org/10.5465/amr.2011.0356

Nayak, B., Bhattacharyya, S. S., & Krishnamoorthy, B. (2023). Integrating the dialectic perspectives of resource-based view and industrial organization theory for competitive advantage–a review and research agenda. *Journal of Business & Industrial Marketing*, *38*(3), 656-679. https://doi.org/10.1108/JBIM-06-2021-0306

Novelli, E., & Spina, C. (2024). Making business model decisions like scientists: Strategic commitment, uncertainty, and economic performance. *Strategic Management Journal*, *45*(13), 2642-2695. https://doi.org/10.1002/smj.3636

Pundziene, A., Gutmann, T., Schlichtner, M., & Teece, D. J. (2022). Value impedance and dynamic capabilities: the case of MedTech Incumbent-Born digital healthcare platforms. *California Management Review*, *64*(4), 108-134. https://doi.org/10.1177/00081256221099326

Rahajeng, D. K. (2025). Innovative Governance in the Startup Era: The Interplay of Technology, Innovation, and Value Creation. *Journal of Indonesian Economy and Business*, *40*(2), 179-195. https://doi.org/10.22146/jieb.v40i2.12038

Ratten, V. (Ed.). (2021). *Entrepreneurship in Indonesia: From artisan and tourism to technology-based business growth*. London: Routledge.

Speakman, J. R. (2013). Evolutionary perspectives on the obesity epidemic: adaptive, maladaptive, and neutral viewpoints. *Annual review of nutrition*, *33*(1), 289-317. https://doi.org/10.1146/annurev-nutr-071811-150711

Sreenivasan, A., & Suresh, M. (2024). Factors influencing competitive advantage in start-ups operations 4.0. *Competitiveness Review: An International Business Journal*, *34*(6), 1155-1177. https://doi.org/10.1108/CR-10-2022-0148

Teixeira, E. G., Moura, G. L. D., Lopes, L. F. D., Marconatto, D. A. B., & Fischmann, A. A. (2021). The influence of dynamic capabilities on startup growth. *RAUSP Management Journal*, *56*(1), 88-108. https://doi.org/10.1108/RAUSP-08-2019-0176

Tiwari, P. (2023). Effect of innovation practices of banks on customer loyalty: an SEM-ANN approach. *Benchmarking: An International Journal*, *30*(10), 4536-4568. https://doi.org/10.1108/BIJ-06-2022-0392

Veliyath, R., & Fitzgerald, E. (2000). Firm capabilities, business strategies, customer preferences, and hypercompetitive arenas: the sustainability of competitive advantages with implications for firm competitiveness. *Competitiveness Review: An International Business Journal*, *10*(1), 56-82. https://doi.org/10.1108/eb046389

Wu, Y., Li, D., & Vermund, S. H. (2024). Advantages and limitations of the body mass index (BMI) to assess adult obesity. *International journal of environmental research and public health*, *21*(6), 757. https://doi.org/10.3390/ijerph21060757

Yellanki, S. K. (2024). Co-Creation and Connectivity: The Role of Consumers in Digital Ecosystem Evolution. *Journal of Artificial Intelligence and Big Data Disciplines*, *1*(1). https://doi.org/10.70179/pbe9g995

Yunus, N. A., Russell, G., Muhamad, R., Chai, T. L., Ahmad Zawawi, M. A. F., & Sturgiss, E. (2023). The experience of living with obesity for adults in Asian countries: a scoping review of qualitative studies. *Obesity Reviews*, *24*(11), e13619. https://doi.org/10.1111/obr.13619

Zhang, Y., Hu, H., Zhu, G., & You, D. (2023). The impact of environmental regulation on enterprises' green innovation under the constraint of external financing: Evidence from China's industrial firms. *Environmental Science and Pollution Research*, *30*(15), 42943-42964. https://doi.org/10.1007/s11356-022-18712-2